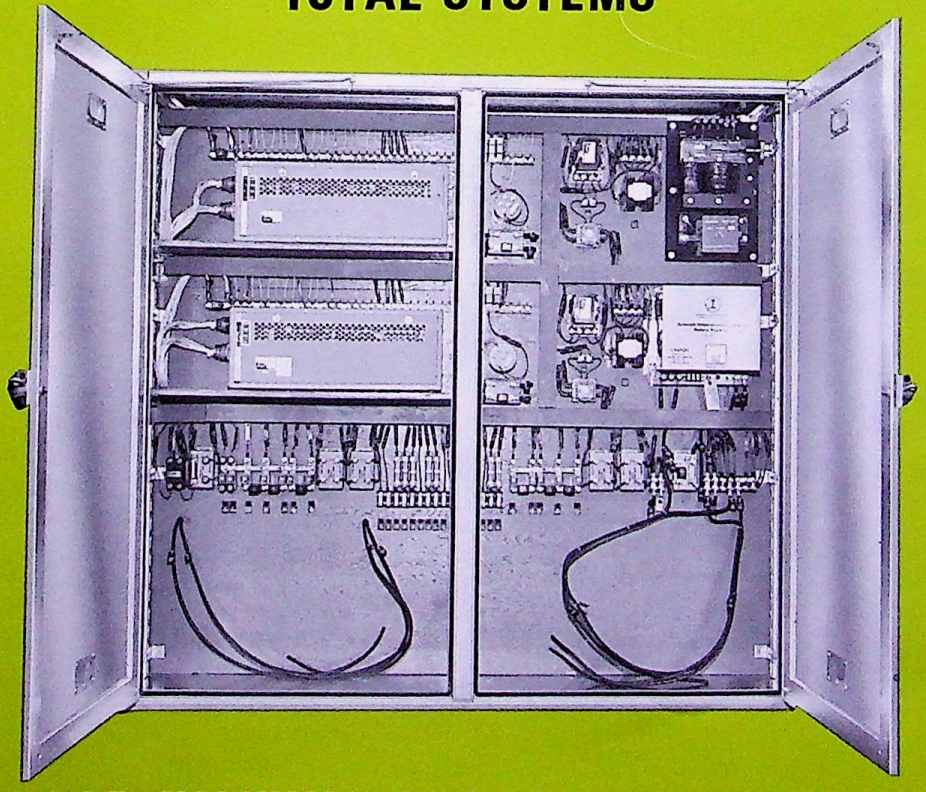
Safetran

PLANNING GUIDE

FOR

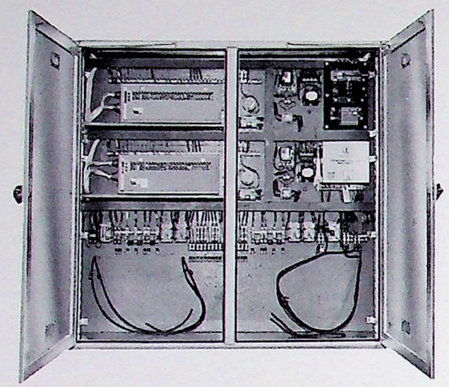
TURNKEY

TOTAL SYSTEMS

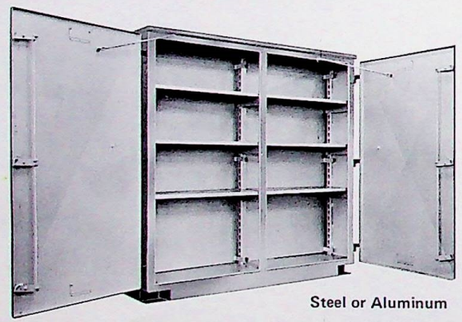


for RAILROAD-HIGHWAY GRADE CROSSING PROTECTION

HOUSING



Today, SAFETRAN makes it possible to select from one source with one responsibility, the most complete and reliable line of housings and foundations in the industry.



Steel or Aluminum

It is with the knowledge that conditions, requirements and desires vary greatly from one location to another that we offer you a complete wired system, designed and built especially for your application – a system incorporating the precise equipment to meet your operating requirements and to assure maximum efficiency at minimum cost with long trouble free life.

Steel or Aluminum

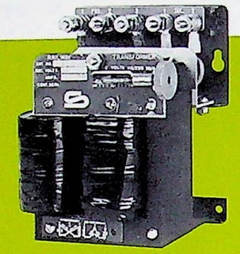
We at SAFETRAN believe that a system designed to protect lives and increase your operating efficiency deserves personalized attention. You are urged to take advantage of the many SAFETRAN design engineering, assembly and installation services when purchasing your "Total System."

To assist your system selection, a brief description of the basic types of control devices and their operation follow.

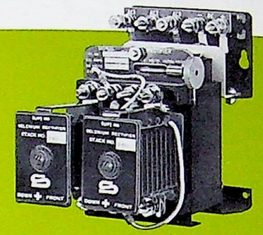
POWER

SAFETRAN has the most complete line of rectifiers, transformers, and power transfer relays necessary to operate the crossing signals.

A standard rectifier would be used where the load is essentially constant.



TRANSFORMER



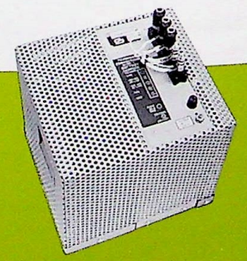
SIGNAL RECTIFIER

TAPER CHARGING RECTIFIER

POWER TRANSFER RELAY

SAFETRAN Taper Rectifiers produce a charge rate which varies relative to the load and battery voltage. The charge rate is lower with a fully charged battery and higher for a low battery. This allows the Taper Rectifier to accommodate loads which vary too much to use a standard rectifier.

Automatic Rectifier

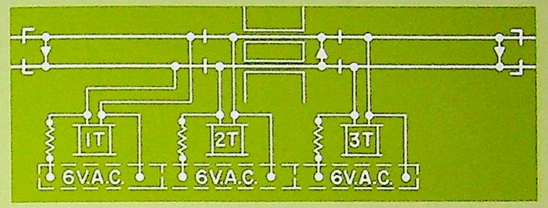


Battery Regulator

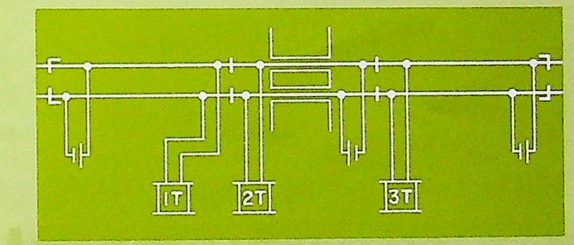
The Automatic Temperature Compensated Battery Regulator will provide an output voltage and current tailored exactly to load and battery condition. Consequently it will satisfactorily accept widely varying loads and will provide maximum recovery after a power outage. Tailoring the charge to battery condition will decrease battery maintenance and increase battery life.

CONTROL DEVICES

SAFETRAN offers a complete line of control devices . . . imaginatively designed and quality built to satisfy both simple and sophisticated railroad-highway crossing situations. Proper application and use will provide desired detection and subsequent protection with minimum vehicular delay.

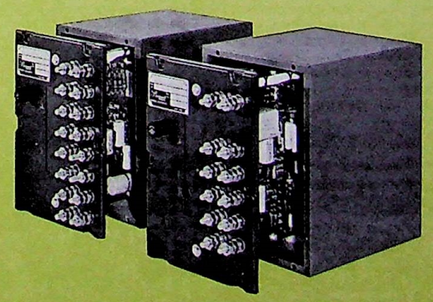


The TYPE "C" TRACK CIRCUIT is suggested for areas where high shunting sensitivity is a requisite. It allows all control equipment, except three track mounted rectifiers, to be housed at the crossing.



The "DC" TRACK CIRCUIT can be employed in either signaled or nonsignaled territory. Insulated joints are required with both Type "C" and "DC" circuits to isolate individual areas of detection.

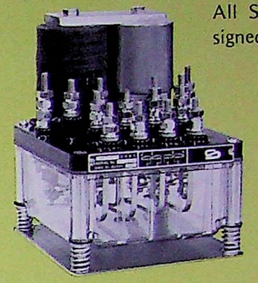
The SAFETRAN "PSO" PHASE SHIFT OVERLAY TRACK CIRCUIT is a solid state modulated system designed specifically to eliminate insulated joints. It is compatible with other track circuits. Low installation costs, low power consumption and ease of maintenance are among its advantages.



The SAFETRAN "PMTC" is a PULSE MODULATED TRACK CIRCUIT used for signal and crossing control on electrified or non-electrified track where interference from other sources prevents the use of ordinary tone systems.

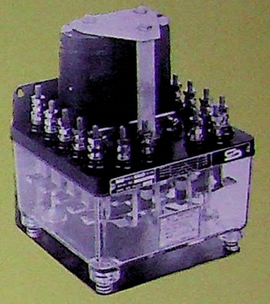
SAFETRAN MODEL E RELAYS

All Safetran Model E Relays are designed to meet AAR Specifications.



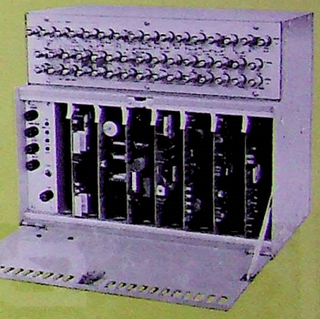
E-5 NEUTRAL RELAY

Relays are furnished with either shelf or wall mounting brackets.

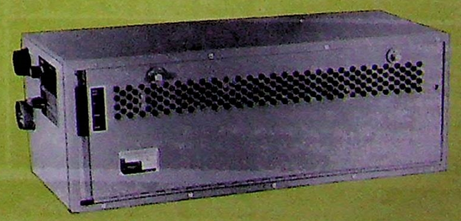


E-1 FLASHER RELAY

The SAFETRAN MOTION SENSOR detects motion toward the crossing and operates the crossing devices. When a train stops and/or reverses direction away from the crossing, the Motion Sensor will automatically clear the crossing protection. This allows high speed rail traffic and eliminates unnecessary vehicular stoppages due to switching operations, etc.



The SAFETRAN "GCP" GRADE CROSSING PREDICTOR is highly recommended to keep signal operations to a minimum at locations where train speeds vary, high density traffic is present and switching moves exist – the highest state of art currently in use. The device is fail safe in design offering constant warning with a solid state analog computor that computes both train speed and distance as it approaches the crossing and activates the crossing protection on a time basis by computing the trains arrival. Elapsed time, from the instant the protection is activated until the train enters the crossing, is the same regardless of train speed. If a train stops before reaching the crossing, the warning signals are also stopped. As the train again starts toward the crossing, the GCP reactivates the crossing protection.



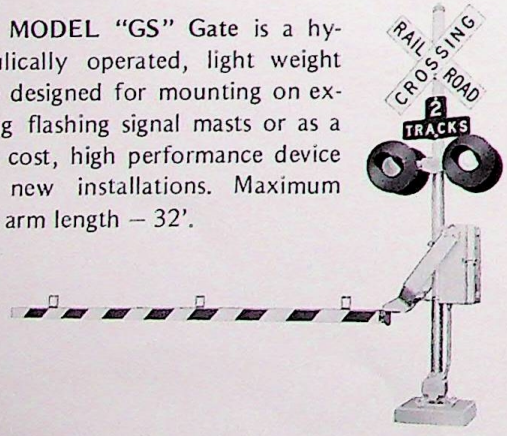
SIGNALS

SAFETRAN manufactures a complete line of audible and visible signals designed to provide maximum protection in a wide variety of railroad highway situations dependably at low cost with minimum maintenance.

The "EM" (ELECTRO-MECHANICAL) GATE is a dependable, heavy duty, pedestal mounted gate featuring extremely low maintenance and fast acting gate arms. Maximum gate arm lengths – 45'.

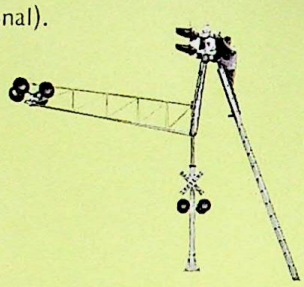
The MODEL "S" is a heavy duty electro-mechanical mast mounted gate with proven reliability, easy installation and low maintenance. Maximum gate arm length – 50'.

The MODEL "GS" Gate is a hydraulically operated, light weight gate designed for mounting on existing flashing signal masts or as a low cost, high performance device for new installations. Maximum gate arm length – 32'.

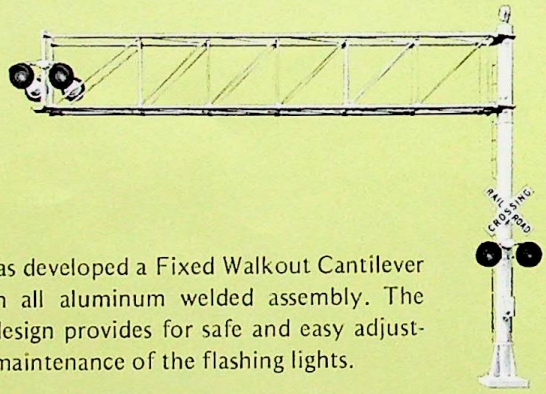


NOTE:
Fiber Glass Gate Arms are available for replacing wood arms on all type of gates. Arms are available striped with a maintenance free reflex-reflective material. The shear bolt feature eliminates mechanism damage and greatly reduces chance of broken gate arms.

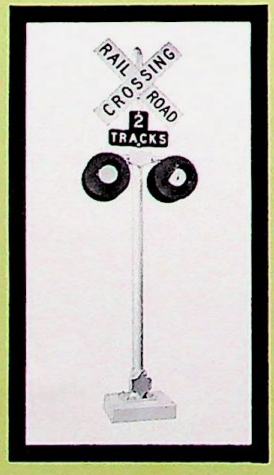
At rail-highway crossings with multiple lanes of highway, the SAFETRAN all aluminum cantilever signals provide highly visible, arrestive signal indication for crossing protection. (Extendable feature is optional).



The cantilever arm can be rotated to any position away from traffic allowing a safe maintenance position. During maintenance of lights on the arm, crossing protection is provided by the fixed main mast lights.



Safetran has developed a Fixed Walkout Cantilever Arm of an all aluminum welded assembly. The structure design provides for safe and easy adjustment and maintenance of the flashing lights.



SAFETRAN Aluminum Flashing Light Signals provide greater arrestive indication and protection and allow ease of installation, low maintenance and long service life.

NOTE:
Advance design FLX-10 Light Signal units with 8-3/8" lens or the FLX-12 with 12" lens are available on all protective devices shown. These units more effectively use the light from standard lamp bulbs to produce greater arrestive indication. A built-in sighting tube permits one man to align the lamp unit for the most effective indication to oncoming traffic. Lexan long range high intensity roundels are now standard.

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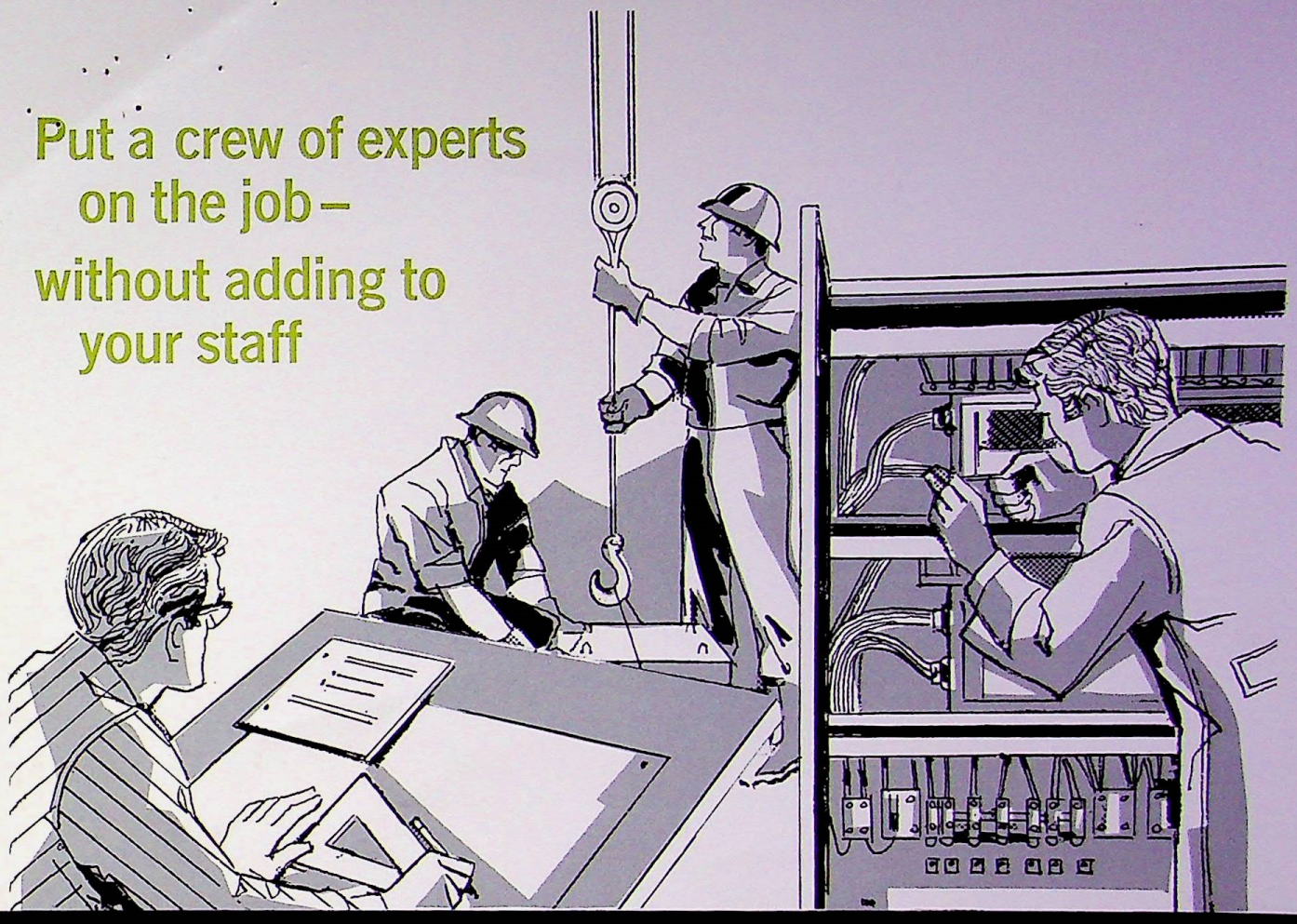

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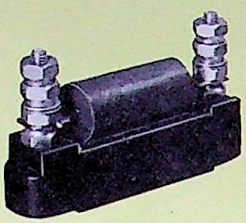
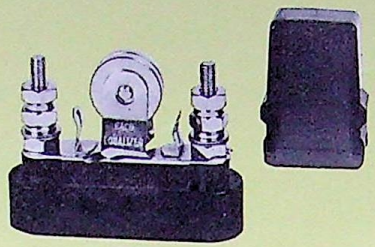
ACCESSORIES

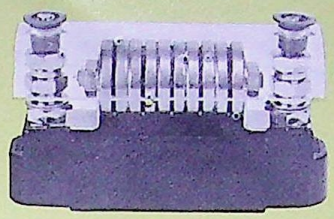
"CLEARVIEW"
LIGHTNING ARRESTER



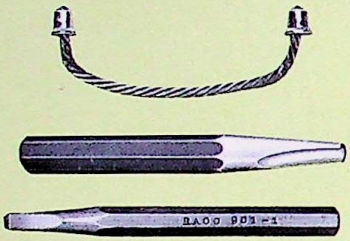
SEALED
RESISTOR



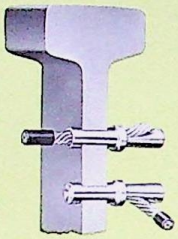
EQUALIZER AND COVER



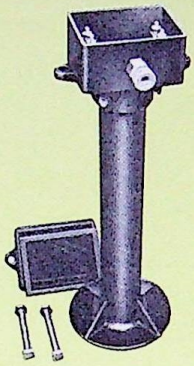
POWER
PROTECTOR



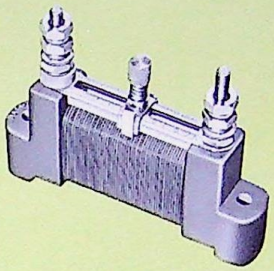
RAILHEAD BOND
AND PUNCHES



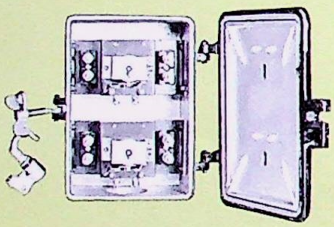
STRAN PIN AND
BOND STRAND



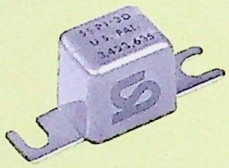
BOOTLEG



ADJUSTABLE
RESISTOR



KEY OPERATED
CIRCUIT CONTROLLER



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